

WELLCOMP TECHNOLOGY CO., LTD

APPROVAL SHEET

Model Name	Metal Strip Current Sensing Resistor
Part Number	WMCST2512 Series
Customer Name	
Customer P/N	
Issued Date	

Customer		Maker		
Approved	Checked	Inspector	Checked	Prepared



元璽科技股份有限公司

WELLCOMP TECHNOLOGY CO., LTD.

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Features

- ◆ Able to withstand high temperature and high current
- ◆ Ultra Low sensing resistance
- ◆ Excellent frequency response
- ◆ Chip size: 2512
- ◆ Lead free, RoHS compliant for global applications and halogen free

Application

- ◆ Mobile electronic equipment-Cellular phone, NB Tablet PC, GPS, DSC, HDD
- ◆ DC-DC converter, Adapter, Battery pack and charger
- ◆ Switching power supply
- ◆ Voltage Regulation module
- ◆ Power management applications

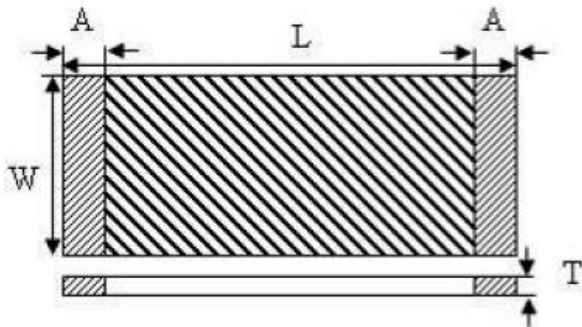
Part Numbering System

WMCST 2512 R010 F C E C

(1) (2) (3) (4) (5) (6) (7)

- (1) Series Code
- (2) Size (EIA): Length x Width
- (3) Resistance: R0025=2.5mΩ, R001=1mΩ
- (4) Tolerance: F=+/-1%, G=+/-2%, J=+/-5%
- (5) Power Rating: S=1/2W, C=1W, D=1.5W, E=2W, H=3W
- (6) Packaging: E-Embossed plastic tape, 7" reel
- (7) Factory Code, C=China Factory

Dimension

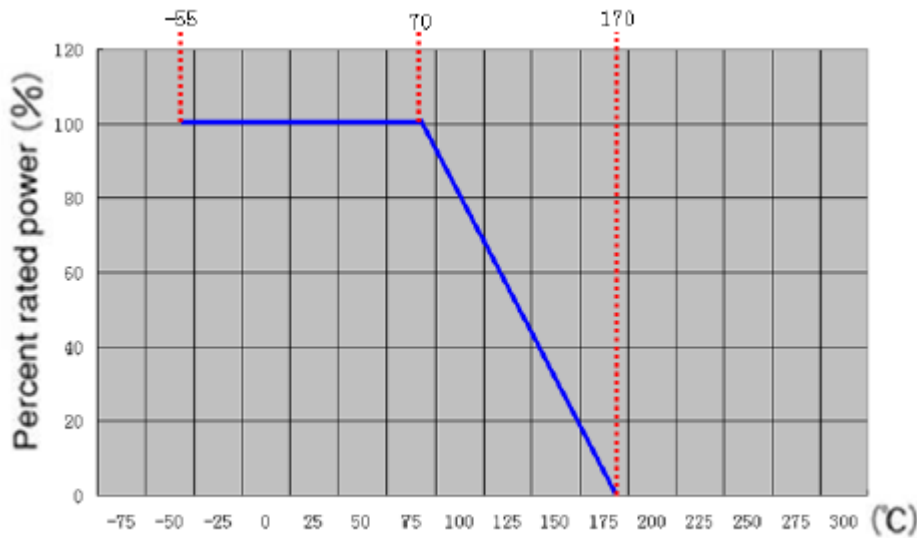


Type	Dimensions(mm)				
	Resistance Range(mΩ)	L	W	t	A
2512	1~2	6.35±0.20	3.20±0.20	0.7±0.20	2.0±0.20
	3~25	6.35±0.20	3.20±0.20	0.6±0.20	0.8±0.20

Electrical Specification

Item	Power Rating	Resistance Range(mΩ)	Operation Temp. Range	TCR (PPM/°C)
2512	1W	1, 2, 3, 4	-55~+170°C	±100
		5, 10, 15, 20, 25		±50
	2W	1, 2, 3, 4		±100
		5, 10, 15, 20, 25		±50

Derating Curve



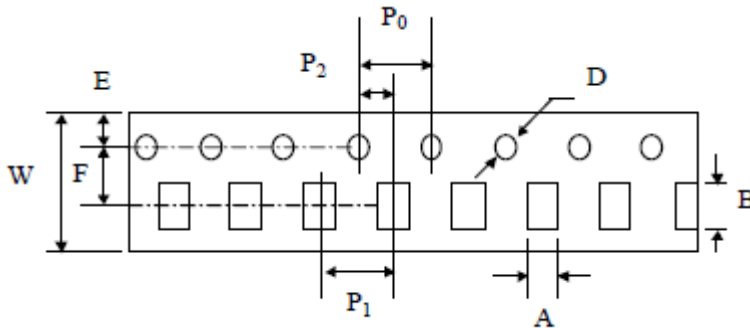
Performances

No.	Item	Test Method	Performance
1	Thermal Shock	-55°C(15min.) /+155°C(15 min.), 5 cycles, (JIS-C5201-4.19)	$\Delta R \leq \pm(1\%+0.0005\Omega)$
2	Solder ability test	245°C±5°C, 3s±0.5s (JIS-C5201-4.17)	95% coverage Min.
3	Short Time Over Load	5x rated power for 5 seconds. (JIS-C5201-4.13)	$\Delta R \leq \pm(1\%+0.0001\Omega)$
4	Temperature Coefficient of Resistance(T.C.R)	+25°C /+125°C. (JIS-C5201-4.8) $TCR (ppm/°C) = \frac{\Delta R}{R \times \Delta t} \times 10^6$	Refer to Electrical Specification
5	Insulation Resistance	100V±15V DC (JIS-C5201-4.6)	$\geq 1000M\Omega$

6	Load Life	1000 hours @ rated power, +70°C, 1.5 hours „ON“, 0.5 hours“OFF“. (JIS-C5201-4.25)	$\Delta R \leq \pm(1\%+0.0005\Omega)$
7	Resistance to Solder Heat	260±5°C, 10±0.5 secs (JIS-C5201-4.18)	$\Delta R \leq \pm(1\%+0.0001\Omega)$
8	Bias humidity	40±2°C, 90%~95% RH, 1000 hours at reated power, 1.5 hours „ON“, 0.5 hours „OFF“	$\Delta R \leq \pm(1\%+0.0005\Omega)$
9	Bending Test	Bending width 2mm, Epoxy thickness 1.6mm, Fulcrums distance 90mm	$\Delta R \leq \pm(1\%+0.0005\Omega)$

Tape Packaging Specifications

◆Embossed Plastic Tape Specifications



Unit:mm

TYPE	A	B	W	F	E	P1	P2	P0	D
2512	3.50±0.2	6.75±0.2	12.0±0.3	5.5±0.05	1.75±0.1	4.0±0.10	2.00±0.05	4.00±0.10	1.50+0.10/-0

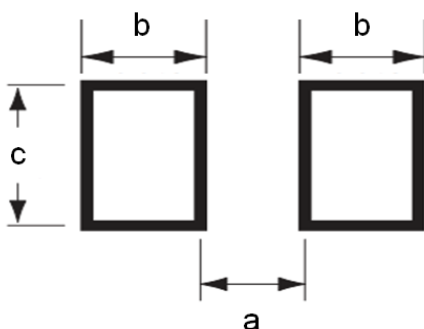
Packaging

Size EIA (EIAJ)	2512
Standard Packing Quantity (pcs /reel)	4,000

Storage Conditions

Temperature : 5~35°C, Humidity : 25~60%

Recommended Solder Pad Layout

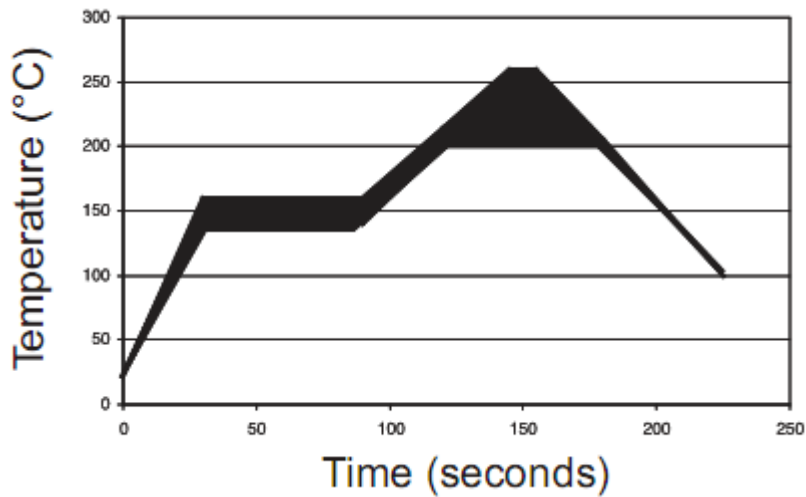


Type	Pad Layout Dimension (mm)		
	a	b	c
2512	3.8	2.1	3.4

●All Specifications are subject to change without notice.

Soldering Recommendations

- ◆ Peak reflow temperatures and durations :
 - IR Reflow Peak = 260°C max for 5 sec
 - Wave Solder = 260°C max for 10 sec
- ◆ Compatible with lead and lead-free solder reflow processes
- ◆ Recommended IR Reflow Profile :



ECN

Engineering Change Notice : The customer will be informed with ECN if there is significant modification on the characteristics and materials described in Approval Sheet.